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**Slater et al.**

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(54) **SURFACE GRAVITY WAVE GENERATOR  
AND WAVE POOL**

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See application file for complete search history.

(57)               **ABSTRACT**

A surface gravity wave generator and wave pool is disclosed.  
A wave pool is formed of opposing side walls and a center  
channel of water. The channel includes a bottom contour with  
a depth that runs from a deep end to a shoal or beach. One or  
more three-dimensional foils are vertically arranged along at  
least one side wall, and moved against the water in the chan-  
nel. Each foil has a curvilinear cross-sectional geometry that  
defines a leading surface that is adapted to generate a wave in  
water moving past the leading surface, and a trailing surface  
configured for flow recovery to avoid separation of the flow of  
water in the wave and to mitigate drag from the foil from the  
water moving past the leading surface.

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**14 Claims, 7 Drawing Sheets**

